



TOWNSHIP OF LUCAN BIDDULPH DEVELOPMENT CHARGES BACKGROUND STUDY (2023)



TOWNSHIP OF LUCAN BIDDULPH

DEVELOPMENT CHARGES BACKGROUND STUDY

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TOWNSHIP OF LUCAN BIDDULPH 2023 DEVELOPMENT CHARGES BACKGROUND STUDY

1.0 Introduction

The Township of Lucan Biddulph is considering establishing, by by-law, revised development charges to pay for capital costs required due to increased needs for services arising from development. The by-law may establish development charges against residential and non-residential development activities in the Township during the period of 2023-2033. This by-law would be passed under the statutory authority of the *Development Charges Act, 1997* (DCA) as amended and its accompanying Regulations. It will replace the existing Development Charges by-law (By-law 08-2020) passed on March 17, 2020.

Section 10 of the Act requires that a development charge background study be completed and specifies the contents of the study. *Ontario Regulation 82/98*, Section 8, as amended (O.Reg. 82/98) further defines the content of the study. This Development Charges Background Study (Background Study) has been prepared in order to provide Council with sufficient information to make a decision on the value of any development charge to adopt. This report includes the following major components:

- An outline of the framework for conducting the study;
- An overview of the local growth forecasts for residential and non-residential activities;
- A summary of growth-related projects and services;
- A synopsis of the methodology applied to establish a development charge;
- The calculations associated with establishing development charges for each applicable service category;
- Asset management information for assets funded by the development charges;
- Presentation of the proposed development charge schedule; and
- Details on the process to implement a Development Charges By-law.

2.0 Background

The Township currently administers a wide variety of public services and maintains an extensive inventory of facilities, infrastructure, equipment and land. Several major infrastructure projects have been initiated in recent years or are being planned for implementation in the foreseeable future. Given the capital investment associated with the provision of these projects and other municipal activities, Council has expressed an interest in considering a new Development Charge By-law to recover applicable costs from new development activities.

B. M. Ross and Associates Limited (BMROSS) was engaged to conduct a Development Charges Background Study to consider the adoption of development charges applicable to new construction activities within the Township. Section 10 of the DCA specifies that the Background Study must include the following components:

- Forecasts for the anticipated amount, type and location of development for which development charges can be applied;
- An estimate of the increased level of service required to accommodate growth (for each service incorporated into the development charge);
- Forecasts of the average service levels for certain services over the 15-year period immediately preceding the preparation of the Background Study. The assessment of previous service levels must consider both the quality and quantity of service provided;
- Assessment of long-term capital and operating costs for infrastructure required for each applicable service;
- Consideration of the use of more than one development charge bylaw to reflect different service areas; and
- An evaluation of life cycle costs and financial sustainability over the lifetime of the asset.

3.0 Current Practice

In 2020, the Township enacted By-law 08-2020, to collect development charges on residential development within the Township. Currently, as set out in By-law 08-2020, there are three development charge service areas: Lucan, Granton and the remainder of the Township. The development charge service categories collected for through the current bylaw include: transportation services, parks and recreation, library services, fire protection services, as well as water and wastewater services in Lucan and Granton.

The current by-law was imposed after consideration of a Development Charges Background Report dated January 15, 2020. This report analyzed potential growth and development across the entirety of Lucan Biddulph and evaluated capital works necessary to service this growth. By-law 08-2020 was passed on March 17, 2020, imposing charges for service categories as identified in the 2020 Background Report.

Under the current bylaw, development charges are only collected from applicable residential development. The charges established under that by-law are as follows:

Table 3.1 Summary of Calculated Development Charges by Unit, Lucan Urban Area

Service Category	Single & Semi Detached Unit	Multi-Units & Townhouses	Apartment (2 or more bedrooms)	Apartment (1 bedroom, bachelor)
Sewage	\$2,961.00	\$2,429.00	\$2,082.00	\$1,272.00
Water	\$285.00	\$234.00	\$200.00	\$122.00
Transportation	\$2,182.00	\$1,790.00	\$1,534.00	\$938.00
Stormwater	\$266.00	\$218.00	\$187.00	\$114.00
Administration	\$74.00	\$61.00	\$52.00	\$32.00
Fire	\$270.00	\$222.00	\$190.00	\$116.00
Library	\$373.00	\$306.00	\$263.00	\$160.00
Parks and Recreation	\$576.00	\$473.00	\$405.00	\$248.00
Total (per unit)	\$6,987.00	\$5,733.00	\$4,913.00	\$3,002.00

Table 3.2 Summary of Calculated Development Charges By Unit, Granton Urban Area

Service Category	Single & Semi Detached Unit	Multi-Units & Townhouses	Apartment (2 or more bedrooms)	Apartment (1 bedroom, bachelor)
Sewage	\$2,217.00	\$1,818.00	\$1,559.00	\$953.00
Water	\$1,185.00	\$972.00	\$833.00	\$509.00
Transportation	\$755.00	\$619.00	\$531.00	\$324.00
Stormwater	-	-	-	-
Administration	\$74.00	\$61.00	\$52.00	\$32.00
Fire	\$270.00	\$222.00	\$190.00	\$116.00
Library	\$373.00	\$306.00	\$263.00	\$160.00
Parks and Recreation	\$576.00	\$473.00	\$405.00	\$248.00
Total (per unit)	\$5,450.00	\$4,471.00	\$3,833.00	\$2,342.00

Table 3.3 Summary of Calculated Development Charges By Unit, Remainder of Township

Service Category	Single & Semi Detached Unit	Multi-Units & Townhouses	Apartment (2 or more bedrooms)	Apartment (1 bedroom, bachelor)
Sewage	-	-	-	-
Water	-	-	-	-
Transportation	\$755.00	\$619.00	\$531.00	\$324.00
Stormwater	-	-	-	-
Administration	\$74.00	\$61.00	\$52.00	\$32.00
Fire	\$270.00	\$222.00	\$190.00	\$116.00
Library	\$373.00	\$306.00	\$263.00	\$160.00
Parks and Recreation	\$576.00	\$473.00	\$405.00	\$248.00
Total (per unit)	\$2,048.00	\$1,681.00	\$1,441.00	\$880.00

The 2022 balance of the development charge reserve funds is summarized in Table 3.4. In 2022, \$485,314 was deposited into the applicable development charge reserve accounts. Over the same year, \$208,928 was withdrawn with the funds put towards either repaying money borrowed to pay for constructed development charge projects or against new development charge projects. The balance of the reserve accounts at the end of 2022 is \$1,940,101.17. It is anticipated that as development charges are collected, they will either remain in reserve until payments for specific development charge projects are made or will be applied to debt repayment for projects that have been previously constructed or implemented.

Table 3.4 Summary of Development Charges Collected, Withdrawn and Current Balances

Reserve Account	2021 Balance	2022 Deposits	Interest	Withdrawals	2022 Balance
Sanitary-Lucan	262,844.12	201,310.00	7,862.10	62,087.14	409,929.08
Water-Lucan	44,324.42	19,341.00	1,325.82	17,294.00	47,697.24
Sanitary-Granton	27,826.14	-	681.42	-	28,507.56
Water-Granton	11,573.34	-	283.42	-	11,856.76
Transportation	645,230.51	152,151.00	19,289.58	63,171.16	753,499.93
Stormwater	60,912.89	18,066.00	1,822.00	18,066.00	62,734.89
Fire	102,499.13	19,718.00	2,969.88	-	125,187.01
Parks and Recreation	270,709.60	42,077.00	8,055.55	-	320,842.15
Library	-650.92	27,236.00	-18.03	26,381.69	185.36
Administration	190,542.30	5,415.00	5,632.17	21,928.28	179,661.19
Total	1,615,811.53	485,314.00	47,903.91	208,928.27	1,940,101.17

4.0 Approach

This report is an update of the 2020 Background Study completed by BMROSS. The purpose of this study is to conform to the requirements of the DCA and to support an amount that can be collected as a development charge. It is also an opportunity to review how the assumptions and forecasts used in the previous report performed. Additionally, the process of implementing and collecting the development charges is reviewed to determine whether changes or improvements need to be made. The approach to conducting the review is as follows:

- Review with municipal staff and Council the existing process, what projects were implemented during the life of the existing by-law and to discuss new projects;
- Review historical and future growth in the Township. Staff provided information on buildings/development activity since the previous report was prepared;
- Township staff and consulting engineers provided updated capital works forecasts and potential projects;
- BMROSS analyzed and evaluated the services collected for in the existing by-law, and the proposed works to service new development, with respect to:
 - Applicability under the Act;
 - Benefit to existing development;
 - Allocation between different types of development;
 - Level of service in the community;
 - Potential impact of long-term capital and operating costs for the proposed works; and
 - Service areas of the proposed works.

The following represent the final components of the development charges process:

- Provide Council with an interim presentation to identify proposed services that could be collected for in a development charge;
- Council determines a development charge amount they intend to collect by by-law;
- Establish, by Council resolution, a development charge schedule which the Township intends to collect;
- Prepare a draft Development Charges By-law prescribing the proposed development charges schedule;
- Arrange a public meeting to present details on the study process and the proposed development charges schedule. The meeting is a requirement of the DCA. A minimum 20-day notice period must be provided prior to the meeting;
- Acknowledge and attempt to address concerns raised during the statutory public meeting, and document input received through consultation;
- Finalize the implementing By-law following consideration of comments received via consultation;
- Obtain, by Council resolution, approval of the proposed Development Charges By-law; and

- Circulate the Notice of Passage for the Development Charges By-law. The By-law will immediately come into effect. The By-law may be appealed to the Ontario Land Tribunal (OLT) in the 40-day period following the passage of the By-law.

5.0 Population and Growth Forecast

5.1 General

Forecasts have been prepared to project population and household growth for the Township over a 25-year planning period. The growth forecasts were established following an assessment of general growth and development trends in Lucan Biddulph as identified from statistical data, building permit data and background research. The forecasts extrapolated from these analyses are considered reasonable projections of growth and development within the Township. The background research and analyses of population and growth is included in Appendix A.

5.2 Current Population and Household Trends

The most recent population count for the Township of Lucan Biddulph is the 2021 Census. In 2021, the population of Lucan Biddulph was 5,680 residents, an increase of 980 persons from the 2016 count and 1,342 persons from the 2011 Census. The increase in population between 2016 and 2021 equates to an annual average growth rate of 3.86%. Over the last 10 years of census data, the annual average growth rate was 2.73%.

The largest population centre in the Township is the community of Lucan. The population of Lucan by the most recent Census count is 3,089 people. This is an increase of 548 people over the 2016 Census count. Granton is the other primary settlement area in the Township. The 2021 population of Granton is 454 persons, estimated from dissemination block information from the latest Census. This is an increase of 36 persons from the 2016 Census. Table 5.1 summarizes the recent census data for Lucan Biddulph and the above noted communities.

Table 5.1 Census Population Counts, 2001-2021

Year	Lucan	Granton	Lucan Biddulph
2001	2,010	*	4,201
2006	1,997	*	4,187
2011	2,014	413	4,338
2016	2,541	418	4,700
2021	3,089	454	5,680
5-year change	548	36	980
10-year change	1,075	41	1,342
20-year change	1,079	-	1,479
5-year change (%)	21.57	8.61	20.85
10-year change (%)	53.38	9.93	30.94
20-year change (%)	53.68	-	35.21
5-year average annual growth rate (%)	3.98	1.67	3.86

Year	Lucan	Granton	Lucan Biddulph
10-year average annual growth rate (%)	4.37	0.95	2.73
20-year average annual growth rate (%)	2.17	-	1.52

* data not available

The increase in population in Lucan Biddulph is driven primarily by increases in the population of Lucan. The increase in the population in Lucan is likely attributable to its proximity to the City of London, availability of lands for development and availability of new homes. The increase in the population of Granton is likely the result of minor infilling.

The number of private dwellings in Lucan Biddulph, Lucan and Granton as counted through previous censuses are summarized in Table 5.2 The number of private dwellings in the Township has increased over the last 20 years, with approximately 727 additional dwellings over that time. The majority of the new dwellings in the Township have been constructed in Lucan, with an increase of 495 dwellings over the last 20 years. The number of private dwellings in Granton, has remained relatively stable and unchanged over the last 10 years.

Table 5.2 Census Total Private Dwelling Counts, 2006-2021

Year	Lucan	Granton	Lucan Biddulph
1996	712	*	1,446
2001	720	*	1,445
2006	722	*	1,556
2011	833	164	1,653
2016	1,006	164	1,837
2021	1,215	165	2,172
5-year change	209	1	335
10-year change	382	1	519
20-year change	495	-	727
5-year change (%)	20.8	0.61	18.2
10-year change (%)	45.9	0.61	31.4
20-year change (%)	68.8	-	50.3
5-year average annual growth rate (%)	3.9	0.12	3.4
10-year average annual growth rate (%)	3.9	0.06	2.8
20-year average annual growth rate (%)	2.7	-	1.2

To gain a better understanding of residential development occurring in Lucan Biddulph, building permit data for new residential dwellings was assessed. Table 5.3 summarizes the number of new residential building units in the Township between 2012 and 2021.

Table 5.3 Building Permits Issued for New Residential Development, 2012-2021

Year	Single & Semi-Detached	Multiple and Apartments	Total
2012	30	0	30
2013	38	0	38
2014	36	11	47
2015	51	0	51
2016	29	0	29
2017	70	23	93
2018	71	0	71
2019	85	0	85
2020	22	70	92
2021	48	31	79
5-year total	296	124	420
10-year total	480	135	615
5-year average	59.2	24.8	84
10-year average	48	13.5	61.5

Growth has been concentrated in Lucan in recent years as phases of numerous residential developments have been completed and built out. In the past, the majority of these developments have consisted of single detached homes, however in the last five years there have been an increase in the number of apartment and townhouse units constructed.

In the future, it is expected that the majority of new units will continue to be single detached homes; however, it is expected that the proportion of multi-dwellings will increase.

5.3 Population and Households Forecast

5.3.1 Forecast Methodology

For the purposes of this study, a population forecast for Lucan Biddulph was developed. These forecasts are based on input from staff, County forecasts, forecasted developments, and building permit data.

The forecast incorporated the following methodological components:

- The 2021 population and household counts, as determined by the 2021 Census, were used as the starting points for the projections.
- The forecasted growth is based on the high growth projections for Lucan Biddulph prepared for Middlesex County by Watson and Associates Economists. This forecast was also used to project growth in the Municipal Class Environmental Assessment for the Expansion of the Lucan Wastewater Treatment Plant.

- Over the 25-year forecast period, it was assumed that 94% of future growth (population and housing) will occur in Lucan, based on the 10-year average distribution of building permits. 5.5% of the growth will occur in the rural area and 0.5% will occur in Granton.
- Population densities throughout Lucan Biddulph are expected to decrease over the forecast period. Over the next 25 years, the number of persons per unit in Lucan is expected to decrease from 2.54 to 2.37, 2.75 to 2.72 in Granton and 2.7 to 2.66 in the rural area of the Township.
- It is expected that the majority of development will occur as single detached units and medium density units (row houses and/or townhouses).

Several major assumptions were also made to substantiate the use of the aforementioned methodology as the basis for a population forecast. They are as follows:

- Population growth will generally be accommodated through the development of existing lots and registered lots through Plans of Subdivisions and Site Plans.
- The Lucan WWTP expansion will proceed in the near future.

5.3.2 Residential and Population Forecast

A residential and population growth forecast was developed for Lucan Biddulph based upon the previously discussed methodology. Table 5.4 shows the population forecasts for Lucan, Granton and the Rural area of the Township. Table 5.5 contains the forecasted number of additional dwelling units over the same period.

Table 5.4: Residential Population Forecast 2022-2047

Year	Lucan Population	Granton Population	Rural Population	Lucan Biddulph (Total)
2021	3,089	454	2,137	5,680
2022	3,123	454	2,139	5,716
2027	3,363	456	2,153	5,972
2032	3,907	460	2,185	6,552
2037	4,511	464	2,220	7,195
2042	5,087	468	2,254	7,809
2047	5,740	473	2,292	8,505
5-year change	240	2	14	256
10-year change	784	6	46	836
20-year change	1,964	14	115	2,093
25-year change	2,617	19	153	2,789

Table 5.5: Residential Dwelling Forecast 2021-2047

Year	Lucan Units	Granton Units	Rural Units	Lucan Biddulph (Total)
2021	1,215	165	792	2,172
2022	1,239	165	793	2,197
2027	1,386	166	802	2,354
2032	1,641	168	817	2,626
2037	1,900	170	832	2,902
2042	2,151	172	846	3,169
2047	2,421	174	862	3,457
5-year change	147	1	9	157
10-year change	402	3	24	429
20-year change	912	7	53	972
25-year change	1,182	9	69	1,260

5.4 Non-Residential Development Forecast

The forecast for non-residential development is based on the additional number of employees associated with the forecasted population growth. It is predicted that the number of employees within Lucan Biddulph will increase proportionally with growth. From the 2016 Census, the number of employees in Lucan Biddulph was 796, which equates to an employee to total population ratio of 0.17. The proportion of new employees for commercial, industrial and institutional uses is based on the number of building permits issued for these uses over the last 4 years. To estimate the amount of non-residential development associated with the additional employees, it was assumed an additional employee equates to: 1,500 m² for industrial uses, 550 m² for commercial uses, and 700 m² for institutional uses. The forecasted amount of non-residential growth over the next 5, 10 and 20 years is shown in Table 5.6. This growth is expected to take place within Lucan, given the availability of municipal services.

Table 5.6 Forecasted Non-Residential Growth (ft²)

Year	2022-2027	2022-2032	2022-2042
Population Growth	256	836	2,093
Employee Growth	43	141	354
Growth in Institutional Employees	15	49	123
Growth in Industrial Employees	6	18	46
Growth in Commercial Employees	22	74	185
Institutional Growth (ft ²)	10,470	34,330	86,191
Industrial Growth (ft ²)	8,413	27,587	69,261

Year	2022-2027	2022-2032	2022-2042
Commercial Growth (ft ²)	12,339	40,461	101,583
Total Non-Residential Growth (ft ²)	31,222	102,378	257,035

6.0 Review of Growth-Related Capital Costs

6.1 General Considerations

Projects and services that are anticipated to be required as a result of growth throughout Lucan Biddulph were reviewed and evaluated. The following factors and evaluation steps were considered during this process:

- Identification of municipal services required to permit occupancy for new development (e.g., water, wastewater, parks and recreation, public work facilities, roads, etc.).
- A review of projects/services contained in the 2020 Background Report.
- A review of new projects/services that were proposed to be collected for in a development charge because they will be required as a result of growth.
- Assessment of the applicability of services and projects under the DCA, taking the following factors into consideration:
 - Eligible Services: Development charges can only be applied to each of the following services to recover the growth-related capital costs for facility construction and improvement, land acquisition and improvement, equipment and furnishings:
 - Water and wastewater services.
 - Stormwater infrastructure.
 - Services related to a highway (as defined in subsection 1(1) of the *Municipal Act, 2001*).
 - Electrical power services.
 - Policing services.
 - Ambulance services.
 - Waste diversion services.
 - Fire Protection services.
 - Library services.
 - Long term care services.
 - Parks and recreation services.
 - Childcare and early year programs and services.
 - Services related to by-law enforcement and municipally administered courts.
 - Emergency preparedness services, and
 - Transit services.
- Identification of completed projects and services which benefit future development and included allocations specifically for growth (i.e., additional capacity).

- Identification of proposed projects and services which will provide benefit to further development within the next ten years; and
- Assessment of the probable capital costs which will be incurred for those projects or services determined to be DCA-eligible.

6.2 Review of Projects/Services from the 2020 Background Report

The evaluation process included a review of growth-related projects that were included in the 2020 Development Charges. The projects were reviewed in terms of their status, cost and grant estimates, and continued applicability. The review is summarized in Table 6.1.

Table 6.1 Summary of Review of 2020 Development Charge Projects

Service Category	Project	Summary of Review
Sewage	Sewage Treatment Lucan	<ul style="list-style-type: none"> • Project completed and eligible costs have been fully recovered. Remove from development charges.
Sewage	Trunk Sewer (Saintsbury)	<ul style="list-style-type: none"> • From review of trunk sewer needs and lands that will be incorporated into the urban settlement area, this project is no longer required. Remove from development charges. • Apply funds collected against other trunk sewer development charge projects.
Sewage	Capital Work Studies to Support growth	<ul style="list-style-type: none"> • No longer eligible for collection under development charges. • Remove from development charges. • Apply funds against other development charge sewage projects.
Sewage	Wastewater Modeling Study	<ul style="list-style-type: none"> • No longer eligible for collection under development charges. • Remove from development charges. • Apply funds against other development charge sewage projects.
Sewage	Sewage Treatment Granton	<ul style="list-style-type: none"> • Capacity remains for future development. • Continue to collect.
Water	Water Supply (Lucan)	<ul style="list-style-type: none"> • Capacity remains for future development. • Continue to collect.
Water	Water Modeling Study	<ul style="list-style-type: none"> • No longer eligible for collection under development charges. • Remove from development charges. • Apply funds against other development charge water projects.
Water	Water Supply - Granton	<ul style="list-style-type: none"> • Capacity remains for future development. • Continue to collect.

Service Category	Project	Summary of Review
Services Related to a Highway	Roads and Sidewalks - Lucan	<ul style="list-style-type: none"> • Update costs. • Continue to collect.
Services Related to a Highway	Salt Storage Facility	<ul style="list-style-type: none"> • Project is built, costs updated. • Continue to collect.
Services Related to a Highway	Public Works Facility	<ul style="list-style-type: none"> • Project is built. • Continue to collect.
Stormwater	Stormwater Management Lucan	<ul style="list-style-type: none"> • Capacity remains for future development. • Continue to collect.
Fire Services	Fire Station Expansion	<ul style="list-style-type: none"> • Expansion of the Lucan Fire Station. • Project constructed. • Continue to collect.
Parks and Recreation	Parkland Development – Lucan	<ul style="list-style-type: none"> • Funds collected for equipping parkland acquired through the development process. • Costs updated to \$100,000/acre to equip park. • Continue to collect.
Parks and Recreation	Parkland Development – Granton	<ul style="list-style-type: none"> • Sufficient funds in reserve for the next 10-years of growth. • Remove from development charges.
Library Services	Library Expansion	<ul style="list-style-type: none"> • Expansion of the library in Lucan. Project is built. • Recalculate based on 15-year average level of service.
Administration	Development Charge Study	<ul style="list-style-type: none"> • No longer eligible for collection under development charges. • Remove from development charges. • Repay general reserve with remaining funds for previous study.

6.3 Review of Additional Services

Additional services that are anticipated to be required as a result of growth in the Township were reviewed and evaluated as part of the study. Table 6.2 provides a summary of new service categories/projects that are proposed to be included in the development charge calculation. Additional information on the projects included in Table 6.2 is also included in Appendix B.

Table 6.2 New Projects for Inclusion in Development Charges

Service Category & Area	Project	Description
Sewage	Lucan Sewage Treatment Plant Expansion	<ul style="list-style-type: none"> • The Township has completed a Class EA for the expansion of the Lucan Sewage Treatment Plant. The expansion will service the next 1,050 equivalent residential units of development. • Project benefits future growth and costs will be recouped, as identified in the EA, through development charges. • Project costs, including interest, are estimated at \$25.5 Million.
Services Related to a Highway	Sidewalk Plow	<ul style="list-style-type: none"> • An additional sidewalk plow is required to service future development. • This will be an addition to the existing fleet.
Parks and Recreation	Soccer Complex	<ul style="list-style-type: none"> • A new soccer complex is being built. The additional recreation facilities will benefit future growth. • Estimated cost is \$3,000,000. • Benefits existing and future growth.
Parks and Recreation	Community Centre Expansion	<ul style="list-style-type: none"> • Expansion of the Lucan Community Centre. Includes the addition of multi-use rooms, changerooms and washrooms. • Project has received a grant. • Will benefit existing and future growth.
Parks and Recreation	All Wheels Park	<ul style="list-style-type: none"> • New all wheels park planned for construction in Lucan. • Estimated cost is \$200,000. • Will benefit future and existing growth.

6.4 Service Areas

In previous iterations of the Development Charges By-law, the Township had development charges for areas with water and wastewater services. These service areas were justified on the basis that there were projects with specific benefitting areas e.g. the Lucan water supply project benefitted only Lucan and therefore was only collected from development within Lucan. Through this Background Study, it has been identified that there are three service areas for the purposes of collecting development charges:

- Lucan
- Granton
- Remainder of the Township

The following table summarizes the projects collected for in each of the service areas.

Table 6.3 Development Charge Projects and Applicable Service Areas

Project	Project Category	Service Area(s)
Lucan Sewage Treatment Plant Expansion	Sewage	Lucan
Trunk Sewers	Sewage	Lucan
Sewage Treatment – Granton	Sewage	Granton
Water Supply (Lucan)	Water	Lucan
Water Supply (Granton)	Water	Granton
Roads – Lucan	Services Related to a Highway	Lucan
Sidewalk Plow	Services Related to a Highway	Lucan
Salt Storage Facility	Services Related to a Highway	Lucan, Granton, Remainder of the Township
Public Works Facility	Services Related to a Highway	Lucan, Granton, Remainder of the Township
Stormwater Management	Stormwater	Lucan
Fire Station Expansion	Fire Services	Lucan, Granton, Remainder of the Township
Parkland Development – Lucan	Parks and Recreation	Lucan
Soccer Complex	Parks and Recreation	Lucan, Granton, Remainder of the Township
Community Centre Expansion	Parks and Recreation	Lucan, Granton, Remainder of the Township
All Wheels Park	Parks and Recreation	Lucan, Granton, Remainder of the Township
Expansion of Library	Library Services	Lucan, Granton, Remainder of the Township

6.5 Asset Management

Amendments to the Development Charges Act in 2015 and Ontario Regulation 82/98 require that development charge background studies include an asset management plan. This plan must include all assets with capital costs funded by development charges and demonstrate that assets are financially sustainable over their full life cycle.

The Township of Lucan Biddulph last updated their asset management plan in 2022. The intent of the AMP is to serve as a strategic, tactical and financial document to allow the Township to follow sound asset management practices while optimizing available resources and achieving a desired level of service. The AMP included consideration of the following asset categories: road network, bridges and culverts, water, wastewater, stormwater, buildings and facilities, parks and recreation, and fleet assets.

A number of the projects funded through development charges have been either built or are expansions to existing infrastructure. These projects were evaluated as part of the 2022 AMP and include:

- Lucan Wastewater Treatment Plant Expansion
- Granton Sewage Treatment Plant
- Lucan Water Supply
- Granton Water Supply
- Public Works Facility
- Main Street Urbanization, east and west
- Saintsbury Urbanization
- Salt Storage Facility
- Stormwater Management
- Fire Station Expansion
- Soccer Complex
- Expansion of the Library
- Community Centre Expansion
- All Wheels Park

The remaining projects have yet to be constructed and represent new assets. It is expected that as these projects are built or bought, they will be incorporated into future updates of the AMP. Given the estimated life cycle of the assets (based on the lifetime estimates), the replacement costs were estimated assuming 3% annual inflation over the lifetime of the asset. The assets not included in the 2022 AMP have a life-cycle cost totaling: \$14.5 million dollars. The assumed life expectancy of the assets ranges from 10 to 75 years. Assuming 3.5% annual interest, the Township will require an additional \$92,317 per year to fund the lifecycle costs of these additional projects. This amount does not factor in potential grants or other contributions.

The number of additional residences in Lucan Biddulph is expected to continue to increase over the next 10 years. The forecasted addition of 429 units will contribute to the existing assessment base and offset the costs associated with these additional assets. Given this, and the Township's continued efforts towards establishing long-term funding strategies, the projects included in the development charges are considered financially sustainable over their life cycles.

7.0 Calculation of the Development Charge

7.1 Methodology

The DCA and O. Reg. 82/98 prescribe the methodology which must be applied to calculate the growth-related capital costs for those projects and services being considered for inclusion into the development charge (i.e., DCA-recoverable capital costs). The following outlines the methodology used to calculate possible development charges for each service category:

Preliminary Capital Cost Assessment

- Establish the total estimated capital costs for those projects or services with growth related components which will be implemented within ten years (i.e., gross growth-related capital costs). Exclude costs for local services installed or paid for by land developers as a condition of approval under Section 51 of the Planning Act (subdivision of land);
- Define the benefiting area for the proposed works and estimate the total capacity of the growth-related project or service. Exclude the proportion of the service that can be met by the excess capacity of existing facilities, unless Council has indicated, at the time the excess capacity was created, that it would be paid for by new development;
- Reduce the net growth-related capital costs of the project or service by the value of any anticipated grants or subsidies.

Service Level and Benefit Adjustments

- Review the service description to determine if the proposed works exceed the average level of service (service standard) in the Township over the previous 15-year period. The determination of average service level must take into account the quantity of service (i.e., number or size) and the quality of service (i.e., value or cost). Reduce the net cost of the works by any anticipated increase in the service standard.
- Reduce the net capital cost by the amount the increase in service would benefit existing development.
- Allocate the net capital costs for project or service between residential and non-residential development (i.e., industrial, institutional, commercial activities), based upon anticipated benefit.

Development Charge Calculation and Cash Flow Adjustments

- Calculate the development charge for each service based upon the estimated amount of future growth it will facilitate during the applicable planning period;
- Determine the residential development charge for various types of dwellings based upon the expected occupancy characteristics. Establish area-specific charges for localized projects and services, as required.

- Establish the non-residential development charge based upon a building standard (i.e., cost per square foot of development). Establish area-specific charges for localized projects and services, as required.

7.2 Assumptions Used in the Development Charge Calculation

7.2.1 Spatial Applicability of Capital Costs

The projects included in the following service categories that benefit development on a municipal-wide basis: Library, Fire Protection, Parks and Recreation (with the exclusion of Lucan Parkland development), Services Related to a Highway (salt storage and public works facility). The projects in the Wastewater, Water, Stormwater, Services Related to a Highway service categories have specific benefiting areas as summarized in Table 6.3. The three service areas are:

- Lucan
- Granton and
- Remainder of the Township

7.2.2 Allocation of Costs Between Growth and Existing Development

Where a proposed service provides a benefit to existing development, the capital costs must be reduced by the amount of the benefit. Where applicable, for purposes of allocating project costs between future growth and existing development, design capacities have been converted to single person equivalents. This permits a cost per person value to be calculated, which applies equally to both existing development and predicted growth. For other projects, where capacity is not defined, the allocation is based on the assumed proportion of benefit to existing and future development.

7.2.3 Allocation of Costs Between Residential and Non-Residential Development

For the purposes of this study, a series of ratios were established to calculate the relative benefit of projects and services to residential and non-residential activities. The ratios were established based upon the current assessment data. Table 7.1 shows the percentage of residential and non-residential development in Township.

Table 7.1 Ratio of Residential and Non-Residential Development in Lucan Biddulph

Category	Lucan Biddulph
Residential	95%
Non-Residential	5%

7.2.4 Occupancy Considerations

The average occupancy rate in Lucan, based on the population and number of dwellings as reported in the Census is 2.3 persons per dwelling unit. Different types of residential development contain different numbers of occupants. On a per unit basis, the smaller the average occupancy, the less demand is generally placed on services. For purposes of this report, the occupancies defined in Table 7.2 are assumed for various housing types. These are based on average occupancies per the last Census.

Table 7.2 Residential Occupancies for Various Dwelling Types

Residential Unit Type	Persons Per Unit	Percentage of Single-Family Unit Charge
Single Family Residential, including semi-detached	2.75	100%
Multi-units	2.63	95%
Apartment (1 bedroom), mobile home, park model trailer	1.1	40%
Apartment (2+ bedroom)	1.5	55%

7.3 Calculated Development Charge

Appendix B provides information on each service category and service component, as well as the key considerations for the calculation of development charges. Based upon the calculations presented in Appendix B, development charge schedules have been prepared for residential and non-residential activities. Tables 7.3 to 7.5 provide a summary of the development charge calculations for Lucan, Granton and the remainder of the Township based on the calculations outlined in Appendix B for the service areas.

It is recommended that development charges schedules, selected by Council using this Report as a guide, be collected by by-law in the Lucan Biddulph for the period 2023-2033.

Table 7.3 Calculated Development Charges, Lucan

Service Category	Single & Semi-Detached (per unit)	Multi-Units & Townhouses (per unit)	Apartments - 2 or more bedrooms (per unit)	Apartments - 1 bedroom, bachelor (per unit)	Non-Residential (per sq.ft)
Sewage Services	\$21,445	\$20,509	\$11,697	\$8,578	\$4.30
Water Services	\$245	\$234	\$134	\$98	\$0.08
Transportation	\$9,782	\$9,355	\$5,336	\$3,913	\$1.74
Stormwater	\$193	\$184	\$105	\$77	\$0.02
Parks & Recreation	\$3,061	\$2,927	\$1,670	\$1,224	\$0.00
Fire Services	\$160	\$153	\$87	\$64	\$0.03
Library	\$374	\$358	\$204	\$150	\$0.00
Total	\$35,260	\$33,720	\$19,233	\$14,104	\$6.17

Table 7.4 Calculated Development Charges, Granton

Service Category	Single & Semi-Detached (per unit)	Multi-Units & Townhouses (per unit)	Apartments - 2 or more bedrooms (per unit)	Apartments - 1 bedroom, bachelor (per unit)	Non-Residential (per sq.ft)
Sewage Services	\$2,195	\$2,099	\$1,197	\$878	\$0.16
Water Services	\$1,015	\$970	\$554	\$406	\$0.02
Transportation	\$762	\$729	\$416	\$305	\$0.43
Parks & Recreation	\$2,335	\$2,233	\$1,274	\$934	-
Fire Services	\$160	\$153	\$87	\$64	\$0.03
Library	\$374	\$358	\$204	\$150	-
Total	\$6,841	\$6,542	\$3,732	\$2,737	\$0.64

Table 7.5 Calculated Development Charges, Remainder of the Township

Service Category	Single & Semi-Detached (per unit)	Multi-Units & Townhouses (per unit)	Apartments - 2 or more bedrooms (per unit)	Apartments - 1 bedroom, bachelor (per unit)	Non-Residential (per sq.ft)
Transportation	\$762	\$729	\$416	\$305	\$0.43
Parks & Recreation	\$2,335	\$2,233	\$1,274	\$934	\$0.00
Fire Services	\$160	\$153	\$87	\$64	\$0.03
Library	\$374	\$358	\$204	\$150	\$0.00
Total	\$3,631	\$3,473	\$1,981	\$1,453	\$0.46

7.4 Development Charge Capital Program Summary

Table 7.6 summarizes the net project costs, amount attributable to existing development and amount potentially recoverable through development charges. The capital costs attributable to future development amount to \$34.3 million dollars. The majority of these costs are attributed to future residential development (\$32.6 million dollars), with approximately \$1.6 million attributed to non-residential development. Actual collection will depend on the rate of development. The total collected may also be impacted by reductions in development charges as a result of legislated phasing in of development charges and additional exemptions and discounts.

For projects included in the development charges \$12.9 million dollars is attributed to existing development and must be funded through reserves, rates and other sources.

Table 7.6 Development Charge Capital Program Summary

Service Category	Net Cost	Amount Attributable to Existing Development	Available Reserves	Total Recoverable through Development Charges	Development Charges Attributable Residential	Development Charges Attributable to Non-Residential
Fire	300,000	-	125,187	174,813	166,072	8,741
Library	1,683,000	990,979	-	692,021	692,021	-
Parks and Recreation	6,224,625	5,314,424	170,842	1,225,559	1,225,559	-
Sewage	27,281,144	4,634,963	438,437	22,624,716	21,477,876	1,146,840
Stormwater	253,664	63,416	62,735	127,513	121,137	6,376
Transportation	11,065,631	1,345,775	753,500	8,966,356	8,518,038	448,318
Water	1,101,755	554,346	59,554	487,855	461,707	26,148
Grand Total	47,909,819	12,903,903	1,610,255	34,298,834	32,662,411	1,636,422

*note – Water and wastewater development charges are calculated based on capacity. Capacity expected to be allocated on first come-first serve basis, so amount collected through development charges will be based on actual development that occurs.

8.0 Implementation

8.1 General Considerations

As discussed, a Development Charges By-law must be adopted to implement a development charges schedule and the associated collection policies. Section 5(1)(9) of the DCA prescribes that the Lucan Biddulph must establish rules within the implementing by-law to set out how development charges will be applied at the local level.

This section of the report outlines certain components of the DCA which will need to be considered during the preparation of the Development Charges By-law.

8.2 Applicable Development

Section 2(2) of the DCA prescribes that development charges can be collected against development activities requiring one or more of the following:

- Issuance of a building permit;
- Condominium Act approval;
- Certain Planning Act approvals (i.e., minor variances, re-zonings, consents, severances, plans of subdivision).

Development charges cannot be applied to development activities which:

- Enlarge an existing dwelling unit;
- Create second or third dwelling units in prescribed classes of proposed new residential buildings, including structures ancillary to dwellings;
- Create additional dwelling units as prescribed (subject to prescribed restrictions); and
- Increase the gross floor area of an industrial development by less than 50%.

Section 3 of the DCA further prescribes that lands owned, and used by, municipal governments and school boards are not subject to the provisions of the by-law. However, Council is also permitted to include provisions in the by-law which exempt specific types of development from development charges. In this respect, local municipalities commonly exempt places of worship, public hospitals and farm buildings from the development charges specified in the by-law.

8.3 Charge Ceilings

Development charges to be collected against new development must not exceed the values defined in Tables 7.3 to 7.5 of this study. Council can establish Development Charges Schedules in the by-law which prescribe charges which are less than those calculated in the aforementioned tables for the entire Township, specific areas of the Township, or specific categories of development.

8.4 Phasing-in

Under section 5(6) of the DCA, development charges must be phased in over the first five years of the by-law. The mandatory phasing is as follows:

- Year 1 – 80% of the calculated charges
- Year 2 – 85% of the calculated charges
- Year 3 – 90% of the calculated charges
- Year 4 – 95% of the calculated charges
- Years 5 to 10 – 100% of the calculated charges

8.5 Inflation Adjustments

The DCA permits development charges to be adjusted to inflation, on an annual basis, using the index specified in O. Reg 82/98. This measure is commonly employed by local municipalities to ensure that the fees collected reflect the real cost of the projects and services.

8.6 Front-Ending Agreements

The Development Charges By-law may contain policies which permit the Township to enter into front-ending agreements with land developers for infrastructure activities specified in the by-law (e.g., watermain installation, road extensions). Front-ending agreements allow developers to finance all, or a portion of the capital costs of a project in order to permit the work to proceed in advance of a municipal capital works schedule. The agreement is required to stipulate, at a minimum, the nature and cost of the work, a cost-sharing program, a collection system and the specific benefiting area.

Under front-ending agreements, the Township typically assumes the following general responsibilities:

- Collecting development charges from subsequent development activities in the defined service area;
- Reimbursing the other parties in the agreement for a share of the development charge (corresponding to the work completed).

Front-ending agreements are subject to public review. Affected property owners may appeal the terms of an agreement to the Ontario Land Tribunal.

8.7 Credits

The Development Charges By-law may contain provisions which allow the Township to permit works specified in the by-law to be carried out by an individual in exchange for credit towards the applicable development charge. The amount of the credit established must reflect the reasonable cost for the doing the work, as agreed upon by the involved parties. The credit provided by the Township can only be applied to the service category, or categories, which are directly related to the work undertaken.

8.8 Discounts

Under Section 26.2(1.1) of the DCA, development charges for rental housing developments must be reduced by the following amounts:

- The development charge for a rented residential premises with three or more bedrooms will be reduced by 25%.

- The development charge for a rented residential premises with two bedrooms will be reduced by 20%.
- The development charge for a rented residential premises not described above will be reduced by 15%.

8.9 Duration of Bylaw

Development charge bylaws expire 10 years after the day they come into force. A municipality may pass a new or additional bylaw prior to the expiry of the existing bylaw.

8.10 Reserve Funds

Starting in 2023, and subsequently on an annual basis, municipalities are required to spend or allocated at least 60% of the monies in development charge reserve accounts for water, wastewater and services related to highway.

9.0 SUMMARY

This report presents the results of a Development Charges Background Study for the Township of Lucan Biddulph. Council is considering a new Development Charges By-law for the Township and the study is required under the *Development Charges Act, 1997*.

The study incorporated the primary key activities:

- Review of historic growth in Lucan Biddulph and extrapolation of growth and development forecasts for that study area;
- Review and evaluation of capital works projects that would be required to service the predicted growth;
- Calculation of a recommended Development Charge Amount for the proposed projects and services in accordance with the DCA.

It is our opinion that the Development Charge Amounts set out in Tables 7.3-7.5 of the report are in compliance with the provisions of the DCA and O. Reg. 82/98. However, the charge that is used in the implementing by-law will be set by Council after due consideration.

10.0 FUTURE ACTION

The following represent the final activities required to adopt a Development Charges program:

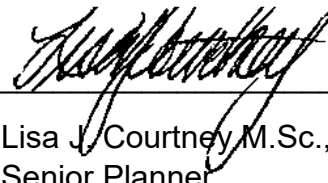
- Council reviews the Background Study. Following due consideration and any required revisions, Council accepts this draft report and by resolution, agrees that the intent of the Township is to implement the growth-related capital works itemized in Appendix B;
- The Background Study is made available for public review 60 days prior to the passing of the By-law;

- Council considers a Development Charge Amount to establish, and specific implementation policies to be incorporated into the implementing by-law;
- A draft by-law is prepared in accordance with the recommendations of Council;
- The statutory public meeting is held with a minimum 20-day notice period. The Background Study and the draft By-law will be made available for public review during the notice period;
- Council must pass the implementing by-law within one year of the completion of Background Study. A 40-day review period must be provided after the passage of the By-law. Any individual or organization may appeal the provisions of the Development Charges By-law to the Ontario Land Tribunal during the review period.

All of which is respectfully submitted.

B. M. ROSS AND ASSOCIATES LIMITED

Per



Lisa J. Courtney M.Sc., RPP, MCIP
Senior Planner

Per



Matt Pearson, RPP, MCIP
Senior Planner

**APPENDIX A
GROWTH AND DEVELOPMENT
FORECAST**

1.0 INTRODUCTION

1.1 General

Section 5(1) of the Development Charges Act, S.O. 1997 (DCA) stipulates that for the purposes of calculating a development charge, “the anticipated amount, type and location of development, for which development charges can be imposed, must be estimated”. The following discussion summarizes the process undertaken to develop a growth and development forecast for the Township of Lucan Biddulph.

Development forecasts have been prepared in conjunction with the Development Charges Background Study to project a population for Lucan Biddulph over 10-year (2022-2032), 20-year (2022-2042), and 25-year (2022-2047) planning periods. The growth projections were established following an assessment of general growth and development trends evident in the Township as identified from statistical data, recent population projections and other background research. The forecasts extrapolated from this analysis are considered to be realistic predictions of population and household growth in Lucan Biddulph. An estimate of non-residential development has been prepared through an analysis of available building permit information.

The growth projections established in this study provide a basis for determining the level of service required to accommodate future development activities. In this regard, the growth forecasts provide a framework to estimate (1) the capital expenditures needed to finance additional service and (2) an appropriate development charge to recover growth related capital costs.

1.2 Background

A series of reports were reviewed to gather background information on population growth and general development trends in the study area. The following are among the key sources of information consulted during this review:

- Statistics Canada Census of Canada data for the period 2001-2021 (data is collected in 5-year intervals).
- Building permit records compiled by the Township for the period 2008-2021. The records detail the type (e.g., residential, commercial, industrial) and value of development.
- 2020 Development Charges Background Study for the Township of Lucan Biddulph by B M. Ross and Associates Limited.
- Lucan Wastewater Treatment Plant Expansion Environmental Class Assessment by B. M. Ross and Associates Limited (2022).
- Township staff and
- An assessment of current development projects and proposals.

2.0 BACKGROUND POPULATION & DEVELOPMENT INFORMATION

2.1 Residential Growth Trends

2.1.1 Population

The most recent population count for the Township of Lucan Biddulph is the 2021 Census. In 2021, the population of Lucan Biddulph was 5,680 residents, an increase of 980 persons from the 2016 count and 1,342 persons from the 2011 Census. The increase in population between 2016 and 2021 equates to an annual average growth rate of 3.86%. Over the last 10 years of census data, the annual average growth rate was 2.73%.

The largest population centre in the Township is the community of Lucan. The population of Lucan by the most recent Census count is 3,089 people. This is an increase of 548 people over the 2016 Census count. Granton is the other primary settlement area in the Township. The 2021 population of Granton is 454 persons, estimated from dissemination block information from the latest Census. This is an increase of 36 persons from the 2016 Census. Table 2.1 summarizes the recent census data for Lucan Biddulph and the above noted communities.

Table 2.1 Census Population Counts, 2001-2021

Year	Lucan	Granton	Lucan Biddulph
2001	2,010	*	4,201
2006	1,997	*	4,187
2011	2,014	413	4,338
2016	2,541	418	4,700
2021	3,089	454	5,680
5-year change	548	36	980
10-year change	1,075	41	1,342
20-year change	1,079	-	1,479
5-year change (%)	21.57	8.61	20.85
10-year change (%)	53.38	9.93	30.94
20-year change (%)	53.68	-	35.21
5-year average annual growth rate (%)	3.98	1.67	3.86
10-year average annual growth rate (%)	4.37	0.95	2.73
20-year average annual growth rate (%)	2.17	-	1.52

* data not available

The increase in population in Lucan Biddulph is driven primarily by increases in the population of Lucan. The increase in the population in Lucan is likely attributable to its proximity to the City of London, availability of lands for development and availability of new homes. The increase in the population of Granton is likely the result of minor infilling.

The 2016 Census (2021 data is not yet available) was consulted to identify recent levels of movement within and to the Township. Between the 2016 and 2011 census periods, 31.2% of the population moved. Approximately 10% moved within the Township, with

18.4% moving to Lucan Biddulph from within Ontario, 0.8% moving from another province, and 1.3% (or 85 people) coming from outside of Canada.

The average age in Lucan Biddulph, as of the 2021 census, is 38.5 years old. This is younger than the provincial average of 41.8 years. Those aged 65 and over account for 15.3% of the population of Lucan Biddulph, whereas children, or those aged 14 or less make up approximately 21.2% of the population. Compared to Ontario as a whole, the proportion of the population less than 14 years old in Lucan Biddulph is greater. This suggests that the Lucan Biddulph has a significant number of families with young children.

2.1.2 Residential Development

The number of private dwellings in Lucan Biddulph, Lucan and Granton as counted through previous censuses are summarized in Table 2.2 The number of private dwellings in the Township has increased over the last 20 years, with approximately 727 additional dwellings over that time. The majority of the new dwellings in the Township have been constructed in Lucan, with an increase of 495 dwellings over the last 20 years. The number of private dwellings in Granton, has remained relatively stable and unchanged over the last 10 years.

Table 2.2 Census Total Private Dwelling Counts, 2006-2021

Year	Lucan	Granton	Lucan Biddulph
1996	712	*	1,446
2001	720	*	1,445
2006	722	*	1,556
2011	833	164	1,653
2016	1,006	164	1,837
2021	1,215	165	2,172
5-year change	209	1	335
10-year change	382	1	519
20-year change	495	-	727
5-year change (%)	20.8	0.61	18.2
10-year change (%)	45.9	0.61	31.4
20-year change (%)	68.8	-	50.3
5-year average annual growth rate (%)	3.9	0.12	3.4
10-year average annual growth rate (%)	3.9	0.06	2.8
20-year average annual growth rate (%)	2.7	-	1.2

To gain a better understanding of residential development occurring in Lucan Biddulph, building permit data for new residential dwellings was assessed. Table 2.3 summarizes the number of new residential building units in the Township between 2012 and 2021.

Table 2.3 Building Permits Issued for New Residential Development, 2012-2021

Year	Single & Semi-Detached	Multiple and Apartments	Total
2012	30	0	30
2013	38	0	38
2014	36	11	47
2015	51	0	51
2016	29	0	29
2017	70	23	93
2018	71	0	71
2019	85	0	85
2020	22	70	92
2021	48	31	79
5-year total	296	124	420
10-year total	480	135	615
5-year average	59.2	24.8	84
10-year average	48	13.5	61.5

The number of new residential building permits issued for Lucan, Granton and the rural areas of the Township per year are summarized in Table 2.4. Over the past 10 years, there were 577 building permits issued for new residential units in Lucan, 4 in Granton and 34 in the rural area of the Township. Over the last 10 years, 93% of the residential building permits issued were for Lucan. The data shows that in recent years, there has been a significant increase the number of building permits issued for residential units in Lucan, averaging 81 permits per year over the last 5 years. Residential growth in Granton and the rural area has been relatively moderate over the last 10 years.

Table 2.4 Residential Building Permits Issued Per Area, 2012-2021

Year	Lucan	Granton	Rural Area
2012	26	0	4
2013	31	1	6
2014	42	0	5
2015	46	0	5
2016	27	0	2
2017	92	1	0
2018	67	0	4
2019	81	0	4
2020	92	0	0

Year	Lucan	Granton	Rural Area
2021	73	2	4
5-year total	405	3	12
10-year total	577	4	34
5-year average	81	0.6	2.4
10-year average	57.7	0.4	3.4

Growth has been concentrated in Lucan in recent years as phases of numerous residential developments have been completed and built out. In the past, the majority of these developments have consisted of single detached homes, however in the last five years there have been an increase in the number of apartment and townhouse units constructed.

In the future, it is expected that the majority of new units will continue to be single detached homes; however, it is expected that the proportion of multi-dwellings will increase.

2.1.3 Occupancy

For the purposes of this study, the average household density, or occupancy, is calculated from the permanent population and number of private dwellings. It is generally expressed as the average number of persons per household. The household density for the Township, Lucan, Granton and the rural area based on census data, is shown in Table 2.5.

Table 2.5 Household Densities (Persons Per Unit)

Year	Lucan	Granton	Rural Area	Lucan Biddulph
2006	2.77	*	*	2.69
2011	2.42	2.52	2.91	2.62
2016	2.53	2.55	2.61	2.56
2021	2.54	2.75	2.70	2.62

*data not available

Over the last 15 years, the average number of people per unit in the Township has declined from 2.69 to 2.62. Similarly, the average density in Lucan has decreased from 2.77 persons per unit to 2.54. The decline in density is a common trend in Southwestern Ontario as a result of shifting demographics, with a greater number of seniors, fewer children per household, and an increase in the number of single-person households. Generally, household densities in the rural areas remain higher than in urban communities.

2.1.4 Types of Residential Development

Residential development in Lucan Biddulph includes a variety of types of dwelling units, including single detached, townhouses, row homes and apartment buildings. Table 2.6 summarizes the number of single detached, multi and apartment units, population living the different unit types and average density as reported through the 2021 Census.

Table 2.6 2021 Count of Residential Units by Type, Lucan Biddulph

Unit Type	Population	Number of Units	Persons Per Unit (PPU)
Single & Semi Detached	5,260	1,190	2.75
Multi	105	40	2.63
Apartment	255	170	1.5

2.1.5 Residential Developments

The majority of residential development in Lucan Biddulph occurs on existing lots, lots created by severance, or lots created by Plan of Subdivision. Township staff provided information on the following potential developments listed in Table 2.7. Historically, most developments have occurred in or are planned for Lucan, given the ability of vacant land and municipal services. In total, there are 417 additional units current proposed for future development.

Table 2.7 Potential and Approved Residential Developments

Name	Status	Units	Type	Location
280 Main	Approved	96	Apartments	Lucan
33318 Richmond St.	Approved	57	Apartments	Lucan
Ausable Fields	Proposed	76	Townhouses	Lucan
Ausable Fields	Approved	12	Single Detached	Lucan
Old Clover Village Phase 4B	Approved	55	Single Detached	Lucan
Old Clover Village Phase 4B	Approved	16	Townhouses	Lucan
Kent St	Proposed	18	Townhouses and 1 Single Detached	Lucan
Fallon Dr.	Approved	26	Single Detached	Granton
Timber Ridge (Phase 1)	Proposed	61	Single Detached	Lucan

2.2 Non-Residential Growth Trends

2.2.1 Labour Force

In Lucan Biddulph, from information gathered as part of the 2016 Census, the number of persons employed is 2,600 or 69.24% of the population aged 15 and over. The unemployment rate is 4.9% which is slightly lower than the provincial rate of 5.3% (as of May 2019). Approximately 27.16% of the population reported not being in the labour force.

Approximately 55% of those who worked, reported working full time. The remaining 45% worked part time. The majority of employed residents in Lucan Biddulph work in

trades, transportation or equipment (18.6%); sales and service (17.86%); business, finance and administration (14%); management (12.89%); and health care (9.76%).

The majority of employees in Lucan Biddulph (52%) commute to work to another municipality in Middlesex County. It is suspected that the majority of these workers commute to the City of London. Approximately 28% of workers commute to another County and only 19% work within Lucan Biddulph.

2.2.2 Non-Residential Development

The number of building permits issued for non-residential development, including additions and new construction, in the Township over the last 4 years is summarized in Table 2.8. In the last four years there have been 20 building permits issued for non-residential buildings. The majority of non-residential growth in Lucan Biddulph over the previous 4 years has been commercial-type uses.

Table 2.8 Summary of Non-Residential Building Permits 2018-2021, Lucan Biddulph

Year	Institutional	Industrial	Commercial	Total Non-Residential Permits
2018	3	0	3	6
2019	2	0	4	6
2020	2	0	4	6
2021	1	3	1	5
Total	8	3	12	20

There are currently two non-residential development proposals in Lucan Biddulph. These proposals are summarized in Table 2.10. There is approximately 7,500 m² of non-residential space currently approved for development. It is expected that the majority of future non-residential development will continue to be in the vicinity of Lucan, where there is an existing industrial park as well as municipal water and wastewater services.

Table 2.9 Non-Residential Developments, Lucan Biddulph

Name	Status	Type	Gross Floor Area (m ²)	Location
Westdell	Approved	Commercial	4,739	Lucan
Fallon Dr.	Approved	Industrial	2,787	Lucan

2.3 Development Patterns in the Study Area

A number of factors could influence growth trends in Lucan Biddulph. Of relevance to this study are the following:

- It is expected that the urban settlement area of Lucan will be expanded in the near future, following the Official Plan Review.
- Continued development in Lucan will be supported by the expansion of the Lucan Wastewater Treatment Plant (WWTP). It is anticipated the WWTP expansion will be completed within the next 2-3 years.
- It is expected that development in Lucan Biddulph, will primarily occur in Lucan, where there is municipal water and wastewater and to a lesser degree in Granton.
- In general, the Township does not contain the scale of manufacturing and service sector activities to draw a significant number of commuters to Lucan Biddulph. However, there may be an increase in the number of remote workers located in the Township following the COVID-19 pandemic.
- It is expected the majority of residential growth will occur as single detached units, however it is expected that multi-unit type dwellings will be built at an increasing rate.

2.4 Residential and Non-Residential Allocation

The allocation between residential and non-residential development for the purposes of calculating development charges is determined from the tax assessment data. The tax assessment data is used to determine the percentage of the tax base that is residential and non-residential. The non-residential percentage includes commercial and industrial development and excludes agricultural, managed forests, and pipeline assessment data. The percentages of residential and non-residential development for Lucan, Granton and the Township are summarized in Table 2.11.

Table 2.10: Residential and Non-Residential Allocations

Area	Residential Allocation (%)	Non-Residential Allocation (%)
Lucan	95	5
Granton	92	8
Rural Area	95	5
Township of Lucan Biddulph	95	5

3.0 RESIDENTIAL GROWTH PROJECTIONS

3.1 Forecast Methodology

For the purposes of this study, a population forecast for Lucan Biddulph was developed. These forecasts are based on input from staff, County forecasts, forecasted developments, and building permit data.

The forecast incorporated the following methodological components:

- The 2021 population and household counts, as determined by the 2021 Census, were used as the starting points for the projections.

- The forecasted growth is based on the high growth projections for Lucan Biddulph prepared for Middlesex County by Watson and Associates Economists. This forecast was also used to project growth in the Municipal Class Environmental Assessment for the Expansion of the Lucan Wastewater Treatment Plant.
- Over the 25-year forecast period, it was assumed that 94% of future growth (population and housing) will occur in Lucan, based on the 10-year average distribution of building permits. 5.5% of the growth of the growth will occur in the rural area and 0.5% will occur in Granton.
- Population densities throughout Lucan Biddulph are expected to decrease over the forecast period. Over the next 25 years, the number of persons per unit in Lucan is expected to decrease from 2.54 to 2.37, 2.75 to 2.72 in Granton and 2.7 to 2.66 in the rural area of the Township.
- It is expected that the majority of development will occur as single detached units and medium density units (row houses and/or townhouses).

Several major assumptions were also made to substantiate the use of the aforementioned methodology as the basis for a population forecast. They are as follows:

- Population growth will generally be accommodated through the development of existing lots and registered lots through Plans of Subdivisions and Site Plans.
- The Lucan WWTP expansion will proceed in the near future.

3.2 Residential and Population Forecasts

A residential and population growth forecast was developed for Lucan Biddulph based upon the previously discussed methodology. Table 3.1 shows the population forecasts for Lucan, Granton and the Rural area of the Township. Table 3.2 contains the forecasted number of additional dwelling units over the same period.

Table 3.1: Residential Population Forecast 2022-2047

Year	Lucan Population	Granton Population	Rural Population	Lucan Biddulph (Total)
2021	3,089	454	2,137	5,680
2022	3,123	454	2,139	5,716
2027	3,363	456	2,153	5,972
2032	3,907	460	2,185	6,552
2037	4,511	464	2,220	7,195
2042	5,087	468	2,254	7,809
2047	5,740	473	2,292	8,505
5-year change	240	2	14	256

Year	Lucan Population	Granton Population	Rural Population	Lucan Biddulph (Total)
10-year change	784	6	46	836
20-year change	1,964	14	115	2,093
25-year change	2,617	19	153	2,789

Table 3.2: Residential Dwelling Forecast 2021-2047

Year	Lucan Units	Granton Units	Rural Units	Lucan Biddulph (Total)
2021	1,215	165	792	2,172
2022	1,239	165	793	2,197
2027	1,386	166	802	2,354
2032	1,641	168	817	2,626
2037	1,900	170	832	2,902
2042	2,151	172	846	3,169
2047	2,421	174	862	3,457
5-year change	147	1	9	157
10-year change	402	3	24	429
20-year change	912	7	53	972
25-year change	1,182	9	69	1,260

3.3 Forecast Assessment

The following represents the key findings of the population and residential development forecasts for the Township of Lucan Biddulph:

- The number of residential units in Lucan Biddulph is expected to continue to increase over the next 20 years. The majority of the development is expected to occur in Lucan and in the form of single detached and multi-units.
- It is forecasted that there will be an additional 2,789 persons in the Township in 25 years.
- It is expected that the future developments via the Plan of Subdivision process will support the continued growth within the Township.

3.4 Conclusions

The forecasts presented in Section 3.2 appear to be reasonable and appropriate forecasts for the Township of Lucan Biddulph, given historic growth rates and the factors previously discussed. In this regard, the forecast defined in Tables 3.1 and 3.2 should be adopted as the basis for calculating the residential development charges for the Township.

4.0 NON-RESIDENTIAL GROWTH FORECAST

4.1 Forecast

The forecast for non-residential development is based the additional number of employees associated with the forecasted population growth. It is predicted that the number of employees within Lucan Biddulph will increase proportionally with growth. From the 2016 Census, the number of employees in Lucan Biddulph was 796, which equates to an employee to total population ratio of 0.17. The proportion of new employees for commercial, industrial and institutional uses is based on the number of building permits issued for these uses over the last 4 years. To estimate the amount of non-residential development associated with the additional employees, it was assumed an additional employee equates to: 1,500 m² for industrial uses, 550 m² for commercial uses, and 700 m² for institutional uses. The forecasted amount of non-residential growth over the next 5,10 and 20 years is shown in Table 4.1. This growth is expected to take place within Lucan, given the availability of municipal services.

Table 4.1 Forecasted Non-Residential Growth (ft²)

Year	2022-2027	2022-2032	2022-2042
Population Growth	256	836	2,093
Employee Growth	43	141	354
Growth in Institutional Employees	15	49	123
Growth in Industrial Employees	6	18	46
Growth in Commercial Employees	22	74	185
Institutional Growth (ft ²)	10,470	34,330	86,191
Industrial Growth (ft ²)	8,413	27,587	69,261
Commercial Growth (ft ²)	12,339	40,461	101,583
Total Non-Residential Growth (ft²)	31,222	102,378	257,035

APPENDIX B
ANALYSIS OF GROWTH-RELATED
PROJECTS

Project Description: A Municipal Class Environmental Assessment has been completed for the expansion of the Lucan Sewage Treatment Plant. The expanded plant will benefit the next 1,050 ERU of development or 2,730 persons.

The treatment plant expansion is forecasted to cost \$17,432,290 (2024 dollars). The expansion project includes replacement of the headworks and expansion of the biosolid storage and treatment facilities, which will benefit the existing users. The portion of the costs that benefit the existing customers is \$4,094,691. The remaining \$13,337,599 is attributable to future growth. It is anticipated that the cost attributable to future growth will be debentured over a 20-year period at 5% interest, resulting in a total project cost of \$25,499,560.

Analysis of Long-Term Capital and Operating Costs: The project costs attributable to the existing customers will be recovered through capital reserves and rates. Operating costs will be borne by the users of the facilities.

Project Benefiting Area(s): Lucan

Costs:

Total Costs	\$ 25,499,560
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 24,499,560

Allocation of Costs

Capacity will be allocated as development occurs. Capacity is expressed as person equivalents, which includes all uses. This project benefited existing and future development equally on a per capita basis.

Benefit to Existing Development (16%)	\$ 4,094,691
Benefit to Future Development (84%)	\$ 21,404,869
Amount available in reserves	\$ 81,329
Amount recoverable through Development Charges	\$ 21,323,540

Development Charge Calculations

Residential Allocation (per capita)

\$ 21,323,540 x 95% (based on residential assessment)	\$ 20,257,363
Divided by future capacity	2,730 persons
Residential development charges (per capita)	\$ 7,420

Non-Residential Allocation (per square foot)

\$ 21,323,540 x 5% (based on non-residential assessment)	\$ 1,066,177
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 4.15

Project Description: Expanded trunk sewers are required to accommodate flows from new development areas in Lucan to the Chestnut Street Pumping Station. There are three sections of trunk sewer that require expansion. The sections are identified in Table B-1.

Table B-1 Trunk Sewer Expansions

Trunk Section	Total Cost	Cost Attributable to Future Growth
Walnut/Stanley Street to Chestnut Sewage Pumping Station	\$231,000	\$207,900 (90%)
Stanley Street (Main Street to Market Street)	\$162,000	\$145,800 (90%)
West Trunk Sewer (Main Street)	\$840,000	\$756,000 (90%)
Total	\$1,233,000	\$1,109,700 (90%)

Analysis of Long-Term Capital and Operating Costs: The trunk sewers will be paid through development charges. Developers will be responsible for services within their developments and local servicing costs to connect to the nearest gravity sewer. Extra operating costs to the Township will be offset by the increased number of serviced properties.

Project Benefiting Area(s): Lucan

Costs:

Total Costs	\$ 1,233,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 1,233,000

Allocation of Costs

This project benefits future development over the next 20 years.

Benefit to Existing Development (10%)	\$ 123,300
Benefit to Future Development (90%)	\$ 1,109,700
Amount in available in reserve	\$ 328,601
Amount recoverable through Development Charges	\$ 781,099

Development Charge Calculations

Residential Allocation (per capita)

\$ 781,099 x 95% (based on residential assessment)	\$ 742,044
Divided by future capacity (1,964 persons)	1,964 persons
Residential development charges (per capita)	\$ 378

Non-Residential Allocation (per square foot)

\$ 742,044 x 5% (based on non-residential assessment)	\$ 39,055
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.15

Project Description: The Township constructed a communal sewage system in the community of Granton in the late 1990's/early 2000's. The plant became operational 2001. The project included the construction of a new treatment plant, pumping station and collection system. The facility was designed for a capacity of 600 person equivalents based on 450 litres per capital per day.

Existing property owners in Granton paid for the sewage facilities through capital rate charges under the Municipal Act. New development will pay for the facilities through development charges. The total cost of the project was \$2,528,466, with \$1,126,342 attributed to construction of the collection system. The development charges do not include costs associated with the collection system. A grant of \$853,476 was also received.

Analysis of Long-Term Capital and Operating Costs: Operating and maintenance costs for sewer facilities are paid by the user. Based on the growth forecast for Granton and current capacity available at the treatment facility, it will be over 25 years before an expansion is required. Future expansion will be subject to changes in the rate of growth or changes in per capita flows.

Project Benefiting Area(s): Granton

Costs:

Total Costs	\$ 2,528,466
Deduct any grants or subsidies	\$ 1,979,818
Amount in reserves	- \$28,508
Subtotal	\$ 520,140

Allocation of Costs

This project benefits future and existing development equally on a per capita basis.

Development Charge Calculations

The cost allocation is based on the current assessment split between residential and non-residential development.

Residential Allocation (per capita)

\$ 520,140 x 92% (based on residential assessment)	\$ 478,529
Divided by capacity (600 persons)	600 persons
Residential development charges (per capita)	\$ 798

Non-Residential Allocation (per square foot)

\$ 520,140 x 8% (based on non-residential assessment)	\$ 41,611
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.16

Project Description: Lucan constructed new water supply facilities in the early 1990s. This project included a watermain from the Lake Huron supply pipeline, a booster pumping station, and an elevated storage tank. The system has a design capacity of 350 litres per person per day. Based on this standard, the system has an effective capacity of 7,700 person equivalents.

Analysis of Long-Term Capital and Operating Costs: This facility was paid for by the existing property owners through capital rate charges under the Municipal Act. This project was included in previous Development Charge By-laws, as Council intended to recover the cost of surplus capacity from future development. Operating costs of the facilities are paid by the users.

Based on the growth forecast for Lucan and the surplus capacity available in the system, it is unlikely an expansion will be required in the short-term.

Project Benefiting Area(s): Lucan

Costs:

Total Costs	\$ 3,969,250
Deduct any grants or subsidies	\$ 3,160,715
Subtotal	\$ 808,535

Allocation of Costs

This project benefits future development equally on a per capita basis.

Benefit to Existing Development (41%) – 3,123 persons	\$ 331,499
Benefit to Future Development (59%)	\$ 477,036
Amount in reserves	\$ 47,697
Amount recoverable through Development Charges	\$ 429,339

Development Charge Calculations

Residential Allocation (per capita)

\$ 429,339 x 95% (based on residential assessment)	\$ 407,872
Divided by future capacity (4,577 persons)	4,577 persons
Residential development charges (per capita)	\$ 89

Non-Residential Allocation (per square foot)

\$ 429,339x 5% (based on non-residential assessment)	\$ 21,467
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.08

Project Description: The Township of Lucan Biddulph has constructed new water supply facilities in the Granton Urban Area. This project involved the construction of a transmission watermain from Lucan. The system is designed to accommodate a population of 600 person equivalents.

Analysis of Long-Term Capital and Operating Costs: The service will be paid for by the existing property owners through capital rate charges under the Municipal Act. Project financing is managed by the Township through a debenture. Operating and maintenance costs of the facility will be paid by the users. Based on the growth forecast and surplus capacity in the system, it will be many years before an expansion is required.

Project Benefiting Area(s): Granton

Costs:

Total Costs	\$ 879,661
Deduct any grants or subsidies	\$ 586,441
Subtotal	\$ 293,220

Allocation of Costs

This project benefits future development equally on a per capita basis.

Benefit to Existing Development (76%)	\$ 222,847
Benefit to Future Development (24%)	\$ 70,373
Amount in reserves	\$ 11,857
Amount recoverable through Development Charges	\$ 58,516

Development Charge Calculations

Residential Allocation (per capita)

\$ 58,516 x 92% (based on residential assessment)	\$ 53,835
Divided by uncommitted capacity (600 – 454 persons)	146 persons
Residential development charges (per capita)	\$ 369

Non-Residential Allocation (per square foot)

\$ 58,516 x 8% (based on non-residential assessment)	\$ 4,681
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.02

Project Description: The capital road projects expected to be completed during the next 10 years are set out in the accompanying table (Table B-2). The projects have been revised from the previous report to reflect the work that has been completed. Table B-2 summarizes the net costs and amounts attributable to existing and future development, and residential and non-residential development. The projects listed will service an additional 580 new units of development or 1,467 additional persons.

Analysis of Long-Term Capital and Operating Costs: Portions of the cost of these projects have been allocated to existing development, depending on the type of project and proximity to growth areas. The cost for these portions will be paid through the tax base of the Township. The expected additional growth will add to the tax base, which will fund long-term maintenance and operations.

Project Benefiting Area(s): Lucan

Costs:

Total Costs	\$ 8,350,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 8,350,000

Allocation of Costs

Is as noted in Table B-2.

Available in reserves	\$ 544,553
Amount recoverable through development charges	\$ 6,705,447

Development Charge Calculations

Residential Allocation (per capita)

\$ 6,705,447 x 95% (based on residential assessment)	\$ 6,370,175
Divided by future growth (1,964 persons)	1,964 persons
Residential development charges (per capita)	\$ 3,243

Non-Residential Allocation (per square foot)

\$ 6,705,447 x 5% (based on non-residential assessment)	\$ 335,272
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 1.30

Table B-2
Township of Lucan Biddulph Development Charges Background Study – Road Capital Forecast

Location	Net Cost (minus grants/subsidies)	Attributable to Existing	Attributable to Future
Community Drive & Scotts Drive	\$ 850,000	\$ 170,000 (20%)	\$ 680,000 (80%)
Main Street Urbanization - East	\$ 1,800,000	\$ 360,000 (20%)	\$ 1,440,000 (80%)
Main Street Urbanization – West	\$ 3,000,000	\$ 300,000 (10%)	\$ 2,700,000 (90%)
Saintsbury Urbanization	\$ 2,700,000	\$ 270,000 (10%)	\$ 2,430,000 (90%)
Total	\$8,350,000	\$1,100,000	\$ 7,250,000

Project Description: The Township requires an additional sidewalk plow as a result of increased development. The estimated cost of an additional sidewalk plow is \$191,000. This addition to the fleet will service the community of Lucan.

Analysis of Long-Term Capital and Operating Costs: This facility represents an addition to the fleet that will require on-going maintenance. It is anticipated that the cost to operate the vehicle will be supported by increase taxes from future development.

Project Benefiting Area(s): Lucan

Costs:

Total Costs	\$ 191,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 191,000

Allocation of Costs

Benefit to Existing Development (25%)	\$ 47,750
Benefit to Future Development (75%)	\$ 143,250
Amount available in reserves	- \$69,038
Amount recoverable through Development Charges	\$ 74,212

Development Charge Calculations

Residential Allocation (per capita)

\$ 74,212 x 95% (based on residential assessment)	\$ 70,501
Divided by future growth (1,964 persons)	1,964 persons
Residential development charges (per capita)	\$ 36

Non-Residential Allocation (per square foot)

\$ 74,212 x 5% (based on non-residential assessment)	\$ 3,711
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.01

Project Description: The Township previously shared a salt storage facility with the Ministry of Transportation. This arrangement has ended and the Township was required to build its own salt storage facility. The salt storage facility will store between 2,500 and 3,000 tonnes. The cost of constructing the facility was \$324,631. This facility will provide storage for the existing population and the next 20 years of growth.

Analysis of Long-Term Capital and Operating Costs: This facility represents an additional municipality facility that will require on-going maintenance. The salt storage facility will have minimal operating costs as it will be used primarily for storage of bulk materials. It is anticipated that the cost to operate the storage facility will be similar to the current costs shared with the Ministry of Transportation for the operation of their storage facility.

Project Benefiting Area(s): All of Lucan Biddulph

Costs:

Total Costs	\$ 324,631
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 324,631

Allocation of Costs

This project benefits the existing population of the Township and the next 20 years of growth

Benefit to Existing Development (61%)	\$ 198,025
Benefit to Future Development (39%)	\$ 126,606
Amount in reserves	- \$69,954
Amount recoverable through Development Charges	\$ 56,652

Development Charge Calculations

Residential Allocation (per capita)

\$ 56,652 x 95% (based on residential assessment)	\$ 53,819
Divided by future growth (1,964 persons)	1,964 persons
Residential development charges (per capita)	\$ 27

Non-Residential Allocation (per square foot)

\$56,652 x 5% (based on non-residential assessment)	\$ 2,833
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.01

Project Description: The previous Public Works garage and shop, with 3.5 bays, was considered inadequate for the proper operation of the department. There was a need for additional work bays, vehicle and equipment storage. An expanded facility, with an equivalent of 6 bays was constructed to service the existing and future population at a cost of \$2,200,000. Under the Development Charges Act, the quantity and quality of service levels should not exceed the past 15-year average service level. The average service level is 3.5 bays serving a population of 4,726 persons, which equates to 0.000741 bays per capita (or 1 bay for every 1,350 persons).

Analysis of Long-Term Capital and Operating Costs: The new facility may have added operating costs as it is larger; although new technology could reduce the impact of some of these costs (including electricity, heating, maintenance).

Project Benefiting Area(s): All of Lucan Biddulph.

Costs:

Total Costs	\$ 2,200,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 2,200,000
Amount available in reserves	- \$69,954
Subtotal	\$2,130,046

Allocation of Costs

Costs are being determined based on providing an equivalent level of service that is the standard in the municipality.

Development Charge Calculations

Residential Allocation (per capita)

\$ 2,130,046 x 95% (based on residential assessment)	\$ 2,023,543
Divided by the number of bays	6
Multiplied by the service level (bays per capita)	0.000741
Residential development charges (per capita)	\$ 250

Non-Residential Allocation (per square foot)

\$2,130,046 x 5% (based on non-residential assessment)	\$ 106,502
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.41

Project Description: The Benn/Whitfield Drainage Area Master Drainage flow defines a plan with four regional stormwater management facilities. The Township plans to purchase lands for these facilities and have stormwater management ponds constructed by developers. The facilities will service both new and existing development. Four of these facilities have been constructed in the past 5 years.

Analysis of Long-Term Capital and Operating Costs: There is an operating cost for these facilities. They require maintenance to remove silt and sludge. This cost will have to be incorporated into the municipal public works budget.

In the last iteration of the Background Study (2015), a stormwater project was removed from the calculation of development charges. The monies previously collected for this project were credited against this project, as required by the Development Charges Act. The amount credited against this project is noted in the deductions below.

Project Benefiting Area(s): Lucan

Costs:

Total Costs	\$ 260,000.00
Deduct any grants or subsidies	\$ 6,336
Subtotal	\$ 253,664

Allocation of Costs

For this project, the benefit to the existing population is 25% and 75% to future development. At the time of the 2010 DC Report, it was estimated the future population served by these facilities in Lucan would be 1,733 persons.

Benefit to Existing Development (25%)	\$ 63,416
Benefit to Future Development (75%)	\$ 190,248
Amount available in reserves	- \$62,735
Amount recoverable through Development Charges	\$ 127,513

Development Charge Calculations

Residential Allocation (per capita)

\$ 127,513 x 95% (based on residential assessment)	\$ 121,137
Divided by future growth (1,733 persons)	1,733 persons
Residential development charges (per capita)	\$ 70

Non-Residential Allocation (per square foot)

\$127,513 x 5% (based on non-residential assessment)	\$ 6,376
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.02

Project Description: There are two fire stations in the Township. The Lucan Fire Station, located at 216 Main Street, consists of 6 bays, 1 office and other facilities totalling approximately 2,000 square feet. The Township also has a 51% ownership of the Granton station, which is approximately 2,500 square feet. An expansion of the Lucan Fire Station was undertaken in 2003. A 2,000 square foot addition was added at the cost of \$300,000. Under the DCA, the quality and quantity levels of service should not exceed the past 15-year average service level. The average quantity level of service is calculated by dividing the square footage of the current facilities (3,275 square feet) by the average 15-year population (4,726 persons) = 0.693 square feet per capita. The average quality level of service is not easily quantifiable. The new facility was built to the community standard and to meet required regulations.

The expansion of the fire station cost \$300,000, which equates to \$150 per square foot.

Analysis of Long-Term Capital and Operating Costs: The operating costs of the fire service, including maintenance of the building, is funded through the general tax base. The expanded building should be capable of servicing the needs of the Township for many years.

Project Benefiting Area(s): All of Lucan Biddulph.

Costs:

Total Costs	\$ 300,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 300,000
Amount in reserves	- \$125,187
Subtotal	\$174,813

Allocation of Costs

Not applicable as the costs are being determined based on providing the equivalent level of service as is standard in the Township at the time.

Development Charge Calculations

Residential Allocation (per capita)

\$ 174,813 x 95% (based on residential assessment)	\$ 166,072
Divided by square feet of expansion	2,000 sq. feet
Multiplied by the current level of service	0.693 sq. feet/person
Residential development charges (per capita)	\$ 58

Non-Residential Allocation (per square foot)

\$174,813 x 5% (based on non-residential assessment)	\$ 8,741
Forecasted non-residential growth (20 years) in sq. ft.	257,035
Non-residential development charges (per ft²)	\$ 0.03

Project Description: There are approximately 20 acres of parkland within the former Village of Lucan. The Township anticipates equipping new parkland that is obtained through the development process (either as land or cash in lieu). The cost to develop new parkland is approximately \$100,000 per acre based on experience in other municipalities. New parkland will be developed as it obtained through the development process at a rate of approximately 0.003 acres per person. This is less than the existing standard of 0.0064 acres per person.

Analysis of Long-Term Capital and Operating Costs: Operating costs of new parks will be paid out of the general tax base. The increase in the tax base from new development should offset any increase in operating costs.

Project Benefiting Area(s): Lucan

Costs:

Total Costs	\$ 100,000/acre
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 100,000/acre

Allocation of Costs

Not applicable as the costs are being determined based on providing a service level of 0.003 acres of parkland per person.

Development Charge Calculations

Residential Allocation (per capita)

\$ 100,000/acre x 0.003 acres/person x 1,954	\$ 586,200
Amount in reserve	\$70,000
Amount recoverable	\$516,200
Divided by future growth	1,954
Residential development charges (per capita)	\$ 264

Non-Residential Allocation (per square foot)

This project is solely allocated to residential development

Project Description: The new soccer complex includes four full sized soccer pitches, lighting, irrigation, fencing and drainage infrastructure. The project also includes a washroom/changeroom facility. The estimated cost of these new fields is: \$3,000,000. This project supports additional demands for recreation activities as a result of new development and existing needs.

Analysis of Long-Term Capital and Operating Costs: Operating costs of the new soccer pitches will be paid out of the general tax base. The increase in the tax base from new development should offset any increase in operating costs as well as revenue from registration fees.

Project Benefiting Area(s): All of Lucan Biddulph

Costs:

Total Costs	\$ 3,000,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 3,000,000

Allocation of Costs

Benefit to Existing Development (87%)	\$ 2,610,000
Benefit to Future Development (13%)	\$ 390,000
Amount available in reserves	- \$33,614
Amount recoverable through Development Charges	\$ 356,386

Development Charge Calculations

Residential Allocation (per capita)

\$ 356,386 x 100%		\$ 356,386
Divided by future growth (836 persons)		836 persons
Residential development charges (per capita)		\$426

Non-Residential Allocation (per square foot)

This project is solely attributed to residential development.

Project Description: This project is an expansion of the Lucan Community Centre. The project includes the addition of multi-use rooms and facilities, and expansion of changerooms and washrooms. The project has received an ICIP grant of \$5,525,375. The community is also raising \$750,000 towards the project. Construction of the expansion started in 2022.

Analysis of Long-Term Capital and Operating Costs: Operating costs of expanded community centre will be paid out of the general tax base. The increase in the tax base from new development should offset any increase in operating costs.

Project Benefiting Area(s): All of Lucan Biddulph

Costs:

Total Costs	\$ 9,200,00
Deduct any grants or subsidies	- \$5,525,375
Fundraising goal	- \$750,000
Subtotal	\$ 2,924,625

Allocation of Costs

Benefit to Existing Development (87%)	\$ 2,544,424
Benefit to Future Development (13%)	\$ 380,201
Amount available in reserves	- \$33,614
Amount recoverable through Development Charges	\$ 346,587

Development Charge Calculations

Residential Allocation (per capita)

\$ 346,587 x 100%	\$ 346,587
Divided by future growth (836 persons)	836 persons
Residential development charges (per capita)	\$ 415

Non-Residential Allocation (per square foot)

This project is solely attributed to residential development.

Project Description: A new all wheels park is going to be built within Lucan in 2023. The estimated cost of the skatepark is \$200,000. This park will service existing and future growth.

Analysis of Long-Term Capital and Operating Costs: Operating costs of new skatepark will be paid out of the general tax base. The increase in the tax base from new development should offset any increase in operating costs.

Project Benefiting Area(s): All of Lucan Biddulph

Costs:

Total Costs	\$ 200,000
Deduct any grants or subsidies	- \$0
Subtotal	\$ 200,000

Allocation of Costs

Benefit to Existing Development (80%)	\$ 160,000
Benefit to Future Development (20%)	\$ 40,000
Amount in reserves	\$ 33,614
Amount recoverable through Development Charges	\$ 6,386

Development Charge Calculations

Residential Allocation (per capita)

\$ 6,386 x 100%	\$ 6,386
Divided by future growth (836 persons)	836 persons
Residential development charges (per capita)	\$ 8

Non-Residential Allocation (per square foot)

This project is solely attributed to residential development.

Project Description: In 2014, the Township of Lucan Biddulph approved an expansion of the Lucan library as part of a new municipal civic centre. The cost of the project was \$3,300,000, of which 51% is attributed to the library expansion (\$1,683,000). Under the Development Charges Act, the quality and quantity of service shall not exceed the past 10-year average service level. The average quantity service level was calculated by dividing the square footage of the existing facility (2,700 sq. ft) by the average past 15-year population (4,726 persons) = 0.57 sq. ft per capita. The average quality level of service is not easily quantifiable. The size of the new library facility is 7,068 sq. ft.

Analysis of Long-Term Capital and Operating Costs: For a service category such as library, the amount that can be allocated to the future growth in the current by-law, is restricted to capital works needed to meet only the 10-year growth forecast. The library expansion will be built for more than the projected 10-year growth forecast. It would be ineffective to build otherwise. The Township will collect for excess capacity through development charges, and have previously expressed their intent to do so in previous background studies.

Project Benefiting Area(s): All of Lucan Biddulph.

Costs:

Total Costs	\$ 1,683,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 1,683,000

Allocation of Costs

Not applicable as costs are being determined based on providing the equivalent level of service that is the standard in the municipality. The cost of the expansion is \$238.12/sq. ft.

Development Charge Calculations

Residential Allocation (per capita)

\$ 1,683,000 x 100 % (based on residential assessment)	\$ 1,683,000
Divided by 7,068 square feet	7,068 sq. ft
Multiplied by current service level	0.57 sq. ft/person
Residential development charges (per capita)	\$ 136

Non-Residential Allocation (per square foot)

This project is allocated to residential development only.